

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorizations for this examiner's amendment was given in a telephone interviews with Mr. David Longo on 9/27/2010 and 3/29/2011

The application has been amended as follows (based on Applicant's claim list of 8/5/2010, and all of the following amendments result from the 9/27/2010 interview except claim 40 lines 4 and 6, in **boldface letter font**, which result from the 3/29/2011 interview).

Claim 24:

Line 1: Delete "*the*" between "*for*" and "*quality*"
Insert, in place deleted "*the*", --a--

Claim 31:

Line 3: Delete "*the*" between "*requesting*" and "*measuring*"
Insert, in place deleted "*the*", --a--

Claim 32:

Line 3: Delete "*the*" between "*with*" and "*maximum*"
Insert, in place deleted "*the*", --a--

Claim 33:

Line 4: Delete "*said*" between "*from*" and "*communication*"
Insert, in place deleted "*said*", --a--

Claim 34:

Line 5: Delete last word "*said*" of the line
Insert, in place deleted "*said*", --a--

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Claim 39:

Line 2: Delete "*the*" between "*stored*" and "*results*"

Claim 40:

Line 1: Delete "*the*" between "*for*" and "*quality*"

Insert, in place deleted "*the*", --a--

Line 4: Delete "***said***" between "***accessing***" and "***first***"

Line 6: Delete "***said***" between "***accessing***" and "***second***"

Claim 42:

Line 6: Delete "*the*" between "*handlers*" and "*one*"

Claim 43:

Line 2: Insert --*the*-- between "*accessing*" and "*first*"

Insert --*the*-- between "*and*" and "*second*"

Claim 46:

Cancel the claim in its entirety

Allowable Subject Matter

2. Claims 24-35 and 38-45 are allowed.
3. The following is an examiner's statement of reasons for allowance:

3.1 Regarding subject matter "*module[s]*" in claims 24-35, 38 and 39.

This group of claims relates to "*a system for a quality status analysis of an access network*". In this group of claims, Independent claim 24 comprises "*an information acquisition module*" and "*an information processing module*" (emphasis added). It is hereby noted that the broadly claimed subject matter "*module*" has been described as comprising particular physical devices/apparatus in the Specification and thus is statutory. For example, the claimed "*information acquisition module*" is shown in Figure 1 as element 14 (and described on page 9 of the original description), comprising "a data access portion 18" (page 11 line 5) which is further shown in Figure 3. Figure 3 further shows that "data access portion 18" comprises "a communication bus 22" (page 12 lines 22-23) and "an adaptive controller 50" (page 12 line 20) that "determines to which network apparatus 3 the specific blocks of commands 21 must be sent, through a communication bus 22 and with which priority" (page 12 lines 21-23). Therefore, this structure at least explicitly requires physical apparatus "communications bus 22" and "adaptive controller 50", and inherently requires a physical transmitter for sending "the specific blocks of commands 21" to particular "network apparatus". Therefore, as a whole, at least the claimed "*information acquisition module*" requires particular machine and/or apparatus and thus is not a software module only, and thus the claimed invention is patentably statutory.

3.2 Regarding subject matter “*method*” in claims 40-45.

This group of claims relates to “*a method for a quality status analysis of an access network*” as required in Independent claim 40. In previous Office Action of 4/27/2010, Examiner determined that the claimed invention is statutory because it is inherently tied to a particular machine, i.e., a network information processor capable of “*processing said static and dynamic network information*” dynamically. Further, the method also requires, for example, “*accessing said second sources to draw dynamic network information associated with said broadband transmissive systems*”, which also requires particular machine to *access said second sources* and to do so *dynamically*. Therefore, as a whole, the claimed “*method*” is patentably statutory.

3.3 Regarding allowable limitations

Independent claims 24 and 40 contain the following underlined limitations, which when combined with other limitations in said claims, render the claims allowable because conventional techniques in the art failed to anticipate or render obvious said limitations when combined with other features:

Claim 24 / 40 ... A system / method ... comprising / comprising the steps of:
... a geometric saturation index indicative of a degree of use of said cables, wherein the geometric saturation index is based on a ratio of a quantity of cable pairs which support said broadband transmissive systems in at least a portion of the access network and a quantity of total available cables in said portion of the access network; ...

Mathematically, this is equivalent to $I_{\text{saturation}} = N_{\text{broadband}} / N_{\text{available}}$ where $I_{\text{saturation}}$ is saturation index, $N_{\text{broadband}}$ quantity/number of cable pairs supporting broadband systems and $N_{\text{available}}$ quantity/number of total available cables.

The previously applied arts drawn to Bowman-Amuash (US 6,556,659) and Hou et al (US 6,324,184), while disclosing other features in said claims, failed to explicitly teach counting $N_{\text{broadband}}$ and $N_{\text{available}}$.

Additional arts drawn to Bernstein et al (US 5,729,370, "Method for Upgrading A Communications Network") discloses (see figure 3) adding certain number of "optical fiber 21" (*broadband*) to a telephony system having certain number of original "copper wire 31" (narrowband), and art drawn to Blackburn (US 2005/0163128, "Digital Subscriber Line User Capacity Estimation") discloses (see figure 3) estimating maximum number DSL users based on number of available DSL lines (*broadband*). These arts failed to teach *saturation index* calculated as *ratio* of $N_{\text{broadband cable pairs}}$ over $N_{\text{available}}$ available cables.

Therefore, claims 24 and 40 are allowed, resulting in the allowance said in section 2 above for all pending claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANDREW LAI whose telephone number is (571)272-9741. The examiner can normally be reached on M-F 7:30-5:00 EST, Off alternative Fridays.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Yao can be reached on 571-272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Andrew Lai/
Examiner, Art Unit 2473

/KWANG B. YAO/

Supervisory Patent Examiner, Art Unit 2473